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CELEBRATING 100 YEARS OF EDUCATION
FEBRUARY 6, 2003 www.uvic.ca/ring
THE UNIVERSITY OF VICTORIA'S COMMUNITY NEWSPAPER

inside

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Over the top!

UVic United Way campus campaign chair Don Jones (left) and UVic President Dr. David Turpin, who chaired the 2002 Greater Victoria United Way Campaign, celebrate thermometer-busting totals for both their campaigns. The final tally for UVic's campaign topped $135,000—a 15 per cent increase over last year's total and well over the campaign goal of $120,000. "We surpassed all of our expectations," says Jones. "I want to give particular credit to the leadership committee for bringing new leaders [donors giving more than $500] to the campaign. Under Dave's leadership, Greater Victoria's campaign raised a record $4.1 million." Adds Turpin: "This is the first time in the history of the United Way of Greater Victoria that we've exceeded $4 million. It's an outstanding effort that will improve the quality of life for each and every member of our community."

Committee sets direction for revised campus plan

After two months of reviewing feedback on the draft campus plan, UVic's campus development committee (CDC) has recommended some changes to the plan.

These changes come in response to input gathered over the six months of public consultation, which followed the release of the draft plan in May 2002.

At its Jan. 29 meeting, the CDC—a 25-member body composed of faculty, deans, students, staff and vice presidents—recommended that a new version of the plan include:

- a 10-year moratorium on development in an area yet to be fully defined, but generally to include the South Woods, University Gardens, Garry Oak Meadow and Bowker Creek headwaters special study areas outside Ring Road;
- a 10-year freeze on the use of building site six located in the wooded area beside the Cunningham Building on the southwest side;
- a recommendation to the president to review the future role and structure of the CDC once a new campus plan has been approved.

In addition to these three general changes, the eventual new plan will also see a number of other important content changes to address concerns raised during the consultations.

The task of incorporating these concepts into a new draft of the plan has been assigned to a five-person subcommittee that will work with Jack Falk, UVic's vice president finance and operations, and CDC chair, to produce the next version of the document. The new document will then be subject to the approval of the CDC, released publicly, shared with the community through a variety of means, and forwarded to the president for consideration by the university's board of governors.

The moratorium clarifies the university's intentions for what were termed "special study areas" in the May 2002 draft plan. The draft plan identified these areas as important to the university's character and its teaching and research activities, and to the interests of the community. A moratorium would make it clear that no development will take place in these areas for at least 10 years. A

See CAMPUS PLAN ... p. 4

ZAP! POW! NOW YOU'RE LITERATE

Three UVic psychology profs launch video game study

by Maria Lironi

Can playing computer and video games actually make your child more literate? That's what a team of UVic psychologists wants to know.

For the next two years, Drs. Michael Masson, Daniel Bub and Christopher Lalonde will be testing children to see whether the planning and strategizing skills they learn by playing computer and video games are applicable in the real world.

"All three of us have adolescent children who play computer and video games, and one day we got to discussing games and literacy," Masson recalls. "This made us think about the general notion of literacy beyond being able to read the printed word."

There are a number of different kinds of literacy, he says. There's language literacy, literacy having to do with the ability to plan future actions and interact with other individuals with goals in mind, and scientific literacy such as the ability to learn about physics.

"But if the computer game teaches a certain type of literacy, is it applicable in real life?" he asks. "That's what we aim to find out."

The team will begin by advertising for volunteers—boys and girls between the ages of 12 and 16-years-old who already have a certain level of expertise in the chosen games. Then the children will be given a test to measure their general skills rather than those used for the games themselves.

Next, the team will revise and hone the test for use on a new set of volunteers who don't have prior experience with the chosen games. After practising with the games, the new volunteers will undergo the test given previously to skilled players.

"It's clear that a certain segment of youngsters spends a lot of time interacting with this kind of environment," says Masson. "Computer games may be the modern equivalent of exposing our kids to literature."

Masson hopes that the partnership that will develop with video game producers through this study, and the information gained from the research, can influence gaming design strategy to support literacy. The $42,430 study is being funded for one year by the Canadian Language and Literacy Research Network. For more information go to <www.uvic.ca/psyc/games/>.

Car-sharing offers transportation alternative

While taking the bus, riding a bike, walking or carpooling are the ideal means of environmentally friendly transportation, having access to a vehicle is sometimes a necessity. But with the high costs of owning a car, that option isn't always feasible—until now.

UVic is the latest entry into the Victoria Car Share Co-operative, whose nearly 75 members are all part-owners in five vehicles conveniently located around town and available to them for time periods ranging from one hour to a week or more.

At a ribbon-cutting ceremony on campus last week, a 2002 Honda Civic was welcomed into the co-operative. Thirteen new members—including students, staff and alumni—have joined forces to lease the new car.

At the ceremony, UVic President Dr. David Turpin said the co-op can play an important role in traffic management on campus. Encouraging commuters to use different forms of transportation to campus is one of the main goals of a UVic transportation demand management (TDM) strategy now in the planning stages.

"UVic is a prime demographic for the car share co-op, and with the TDM strategy and the U-Pass buses, initiatives like these are very complementary," says Sarah Webb, a biology student and UVic senate member who was largely responsible for bringing the co-op to campus. "People who share cars tend to drive less, reducing traffic, air and noise pollution, and other social costs."

Car sharing also lowers vehicle ownership expenses, adds Webb. "It's great for people who need a car once in awhile, but don't want the hassles associated with owning a car. This is an ideal program for UVic students to get involved in to save money."

The university has donated a permanent space and sign for the co-op car near the bus loop. Webb would like to see more

See CAR CO-OP ... p. 10

Jump-start your job search at the UVic Career Fair

by Heather McCloy

If you're a student anxious about choosing a career path and finding a job once you graduate, don't let worry and self-doubt wear you down. UVic's annual Career Fair, Feb. 10–11, has your future in mind.

Between 10 a.m. and 3:30 p.m. in the SUB both days, more than 45 exhibitors, including employers and educational organizations, will be on hand to answer questions and entice students with career options they may never have considered.

The fair is not exclusive to upcoming graduates and alumni, stresses fair co-ordinator and international commerce co-op student Uri Avidan. It also offers options for co-op work terms and summer employment to students from first through fourth-year.

"This is an excellent opportunity for students in the earlier stages of university to see what the companies are all about and help them make a decision on a major," says Jennifer Margison, manager of UVic career services. "It's primarily an opportunity for students and alumni to do some networking and talk to recruiters face-to-face on university turf."

There's more diversity in exhibitors this year, with companies and schools such as the Vancouver Coastal Health Authority, Electronic Arts Canada, the Canadian Security Intelligence Service, the Canadian College of Naturopathic Medicine and the Calgary Board of Education.

A number of exhibitors have told Margison that it's one of the best postsecondary career fairs they attend. Amy Roy, western Canada recruiter for Staples Business Depot, enjoys the interaction with students at the fair, having personally joined the company right out of college. She has hired UVic students before, and describes them as "informed and realistic about the job market and the opportunities that exist."

Last year, more than 4,000 people from UVic, Camosun, Royal Roads and Malaspina attended the fair.

To prepare for the event, Margison urges students to do some research on companies they're interested in, prepare questions to ask the exhibitors, collect business cards and work on their handshakes. Also, she recommends that students think beyond the actual business of the company and focus on the types of positions the company has to offer. "This is an avenue for students to gain self-confidence," she says. "They need to remember they have something employers are after."

For more information on the Career Fair—including a complete list of exhibitors, tips on how to prepare for the event, and upcoming career forums in March—pick up a copy of the career fair booklet around campus or go to <www.uviccareerfair.com>.

Test your UVic knowledge…and win!

100 YEARS OF EDUCATION

2003 marks the 100th anniversary of postsecondary education on Vancouver Island by UVic and its predecessors Victoria College and the Provincial Normal School. But how much do you know about this century of learning?

Challenge your knowledge of UVic history with this 2003 quiz and win great 2003 merchandise prizes! Send your responses via e-mail to 2003@uvic.ca by Friday, Feb. 21. Be sure to include your name and phone number.

1. Who participated in the sod-turning ceremony to symbolize the start of construction of the Gordon Head campus?
A. Joseph B. Clearihue
B. Percy Harris Elliott
C. Thomas Warren Cornett
D. Harry Martlet

2. Victoria College was originally affiliated with which university?
A. University of British Columbia
B. McGill University
C. Queen's University
D. Juan de Fuca University

3. Who was the first principal of Victoria College from 1903–1908?
A. Dr. Donald L. MacLaurin
B. Thomas Shanks McPherson
C. Edward B. Paul
D. Clyde Camosun

4. How many students were in the 1902–1903 class of Victoria College?
A. 22
B. 7
C. 12
D. 0 (it was a distance education class)

5. Before it was called *The Martlet*, what was the name of UVic's student newspaper?
A. *The College Times*
B. *The Microscope*
C. *The Tower*
D. *The Rabbit*

around the ring

New awards honour research achievers

The university has created a new series of awards to honour research excellence at UVic. The Craigdarroch Research Awards will be offered in four categories. The Gold Medal for Career Achievement, which includes a $1,000 research grant, honours a distinguished record of published research or creative activity that has substantially advanced the discipline or art. The Silver Medal for Excellence in Research, which also includes a $1,000 research grant, recognizes excellence in pure or applied research or creative activity. The Award for Project Excellence honours achievement in a research or development team project. And the Award for Societal Contribution recognizes a project that makes an exceptional contribution to the betterment of society. The first awards will be announced in October. The nomination deadline is April 1. For details on eligibility, nomination and adjudication procedures, go online to <www.research.uvic.ca/News/> or contact Cecilia Freeman-Ward at 721-8104, cecilia@uvic.ca.

Lecture looks at women and constitution

The important and often controversial roles women's organizations have played in Canada's decades-long constitutional debate is the topic of an upcoming lecture by UVic political scientist Dr. Matt James. The lecture, titled "Misrecognized Materialists: Women's Organizations and the Struggle for Recognition in Canadian Constitutional Politics" takes place at noon on Thursday, Feb. 13 in the senate chambers (University Centre A180). His presentation is part of the "On and Of Women! Scholarship Showcase," presented by the Faculty Women's Caucus. James' work focuses on social movements in the context of debates about Canadian constitutionalism and citizenship. The Faculty Women's Caucus serves about 600 women librarians, sessionals and full time professors at UVic. The lectures are informal, open to the entire university community, and are catered, courtesy of the caucus. For more information, call 995-8514.

Science journals now available online

The UVic Libraries is now offering comprehensive online access to scientific and social sciences full-text articles and content from the publisher Elsevier through its ScienceDirect platform. The world's most comprehensive full-text database of scientific, technical and medical information, ScienceDirect provides 24-hour access to over three million Elsevier articles from a database of more than 1,700 journals, plus links to other leading publishers of scientific/technical/medical and social sciences content. UVic Libraries is one of 64 Canadian libraries acquiring access to this material through the Canadian National Site Licensing Project (CNSLP), based at the University of Ottawa and representing university libraries, administrators, researchers and academic associations. Access will be available through 2006 and is a fulfilment of the CNSLP's mission to expand the universe of digital research available to Canada's academic research community. For further details of the agreement check out the Libraries Gateway Web site, under announcements.

HEATHER MCCLOY

In the bag

UVic grounds worker Patrick Green monitors the internal temperature of an "Ag-Bag," one of 10 giant sausage-shaped composting bags set up behind the Saunders Building. Each bag, measuring 61 metres long and one-and-a-half metres in diameter, is stuffed with yard waste, such as leaves, lawn clippings and pruned branches. Air is pumped into them for one month, and the resulting compost is spread around flower and shrub beds on campus. UVic grounds manager Tony James says the new system began last June with two bags, and eight more were recently added to keep up with the demand. "Many people don't know this, but UVic has been composting yard waste since 1970," he notes. The previous open air system did not meet new provincial regulations covering groundwater and odour, and although the current method is more expensive initially, it will be cheaper to operate in the long-run.

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Research exploits HIV infection process

Promising project among many to be featured at biology symposium

by Kristi Skebo

When you hear a story about the HIV virus, the news is usually anything but good. But what if the HIV virus could be used to help humanity? Andrea Vaags, an MSc candidate in UVic's biology department, thinks this may be possible.

When the HIV virus invades a person, it tricks human cells into expressing proteins encoded on its genome. One of these proteins, known as TAT (transactivation protein), is released from infected cells and stimulates expression of the HIV genome in neighbouring cells, helping to quickly spread the infection throughout the body.

"It's this ability to cross cell membranes that I'm trying to capitalize on," explains Vaags, whose supervisor is Dr. Francis Choy. "Unlike most proteins that enter a cell, TAT doesn't require a specific receptor to help pull it across the cell membrane; somehow it just slips through."

Using this property, Vaags is trying to get the TAT protein to 'piggy-back' another, much larger protein—glucocerebrosidase (GBA). People who lack the GBA protein suffer from Gaucher disease, which is hereditary in humans. Because they can't break down certain lipids in the body, fat tends to accumulate in the liver, spleen, bone marrow and, in severe cases, in lethal amounts in the brain.

Current treatment involves enzyme replacement therapy—human GBA, produced in hamster cells, is injected into those with mild cases of the disease, preventing the build-up of fat. "Unfortunately those with severe cases, who suffer some degree of neurological damage, aren't helped by this therapy," says Vaags. "GBA can't penetrate the blood-brain barrier, a protective layer around the brain and is unable to stop the build-up of lipids in the brain."

The TAT protein, however, can penetrate this protective layer, at least in mice. "If this GBA-TAT complex can cross the blood-brain layer in mice, we may eventually get it to work in humans," says Vaags. "This would open the door to treating many other neurological disorders that are caused by metabolic diseases."

Vaags is one of 66 graduate students who will present her work at the 15th annual Biology Graduate Student Symposium, Feb. 19-20. Other topics include: the ecology of B.C.'s amphibians and reptiles; novel forms of hormones and genes; soil dynamics in forest and riparian systems; vision in salmonids; zooplankton communities in marine and freshwater environments; effects of introduced species; and unique sponge reefs on B.C.'s coast.

The symposium takes place in the Centre for Innovative Teaching (CIT). Short talks will be presented in CIT 105 from 9 a.m. to 3 p.m., Feb. 19, and from 9:15 a.m. to 3 p.m. on Feb. 20. Posters will be presented in CIT 110 from 3:30–4:30 p.m. on both days.

For more information on the symposium, contact Kristi Skebo at 721-8858 or kskebo@uvic.ca.

VALERIE SHORE

Vaags

Kristi Skebo wrote this story as a participant in the SPARK program (Students Promoting Awareness of Research Knowledge), funded by UVic, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council.

behind the scenes

First impressions

Recruitment officers spread the UVic message across the nation

by Joy Poliquin

Living out of a suitcase for two weeks at a time can be hard, but it's all part of the job for UVic's student recruitment officers. Actually, it's only a small piece of it.

"It's a busy year," says Bruno Rocca, manager of student recruitment. "Not counting local stuff, they're probably on the road seven to eight weeks during recruitment season. It's really go-go-go for a while."

On the road means giving presentations about UVic to senior high school students across the country. It also means carting around up to 900 copies of recruitment publications. "We're easy to recognize," laughs Rocca. "We're usually carrying a suitcase bulging with publications, and balancing a banner under one arm."

While some officers focus on B.C. schools, others fly across the country to help generate interest about UVic. The recruitment officers include Ryan Barnhardt, Jennifer Chapman and Melana Mar, who are former UVic students and permanent staff, along with two co-op students. Among the five of them, they gave more than 850 half-hour presentations during the September to December recruitment season.

"I try not to put my officers into a position where they're living out of a suitcase for more than a two-week stretch," says Rocca. "It's hard to maintain your energy level on the road when everything you eat comes with fries, so you need to recharge the batteries. But it's so important for them to be out there—it's hard to replace that in-person contact."

The team doesn't get to lounge once the recruitment season is done in early December. In May and June they host forums designed for students who have been offered admission to UVic for the following year. On the home front, officers meet with parents and prospective students, and answer their questions about anything from residence to scholarships to the program they're interested in. They're trained to know all the answers, or where to find them.

"Quite often the visit to campus can be the deciding factor, so to give them the opportunity to speak with someone who can answer their specific questions is a great thing," says Rocca.

Recruitment officers also produce the variety of publications they take with them when visiting schools. These include the Canadian and international undergraduate handbooks, the admission preview handbook, and the student awards and financial aid booklet.

"We're always busy," says Rocca. "The summer is our busy season for doing admissions work, the fall is busy with travel, the early spring is the busy season for hosting community events, and the summer is the busy season for updating publications, processing applications and holding appointments."

Despite the hectic pace, Rocca says the nature of the work keeps his staff happy. "When you talk with these young, enthusiastic students, who are excited and a bit scared, you realize that there are hopes and dreams and aspirations behind every application. That makes it all worthwhile."

JOY POLIQUIN

Rocca

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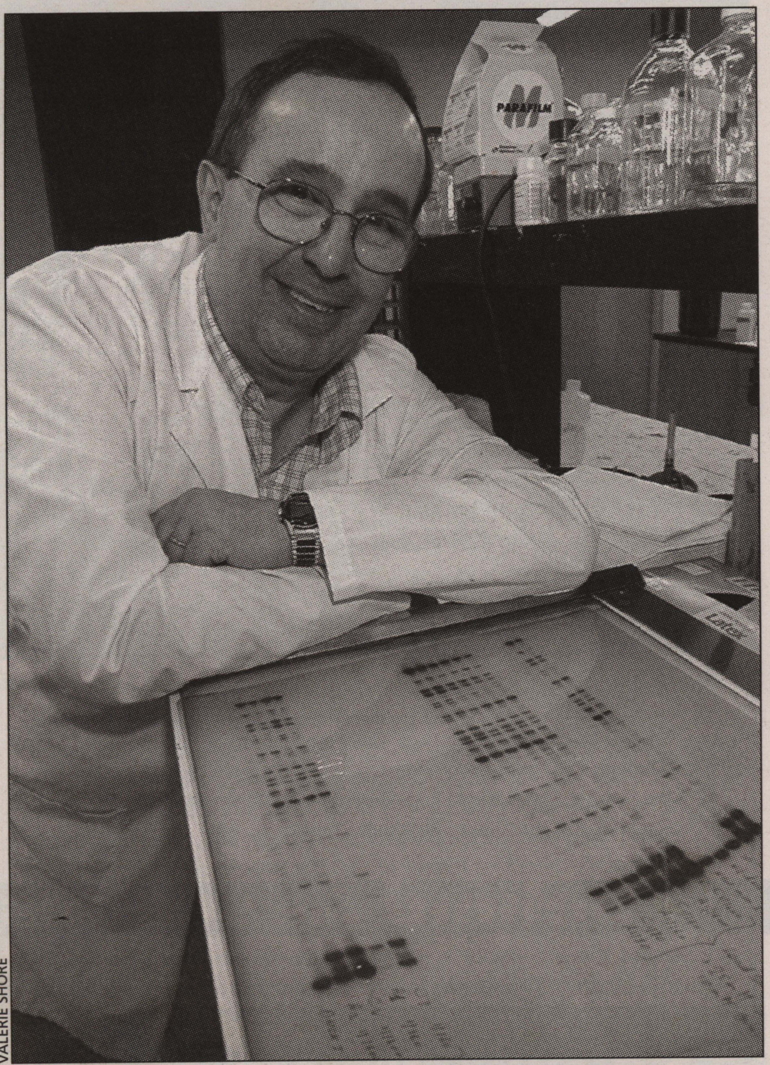
Making the pieces fit

Understanding how DNA and associated proteins interact could revolutionize the prevention and treatment of disease


VALERIE SHORE

Ausió and a DNA "footprint."

by Kristi Skebo

YOU COULD SAY that Dr. Juan Ausió works on jigsaw puzzles of infinitesimal dimensions.

His jigsaw board is a cell nucleus—only two millionth of a metre in diameter—and the pieces he works with are strands of DNA and the special proteins associated with them. How the pieces fit together determines who we each are, and what diseases we might be susceptible to in our lifetimes.

Putting the pieces of this puzzle together is Ausió's life work. The UVic molecular biologist recently received a $500,000 grant from the Canadian Institutes of Health Research (CIHR) to study how structural changes in the DNA and its associated proteins relate to cell function. The work has implications for our understanding of diseases such as cancer and Rett Syndrome.

"How DNA is packaged in a cell nucleus is one of the miracles of life," says Ausió. In a nucleus, there are 46 chromosomes consisting of two sets of double-stranded DNA. Portions of each DNA molecule are wrapped around specific proteins known as histones. This wrapping causes the DNA to twist around itself, forming coils.

To visualize this structure, think of a telephone cord—each loop represents DNA wrapped around a set of histones. If you stick your finger in a loop and twist it, the cord loops around itself. DNA spends most of its time in the cell in this coiled state known as chromatin.

When a section of chromatin unfolds, it exposes genes and allows them to be switched on, their DNA is read and the corresponding protein is synthesized. What causes a section of chromatin to unravel and which parts of the DNA are read can significantly affect how the cell functions.

"Different chemical changes to the DNA or histones can cause the chromatin to either unfold or to wrap more tightly around itself," says Ausió. "Genes that are in tightly folded regions of chromatin can't be expressed."

Sometimes, mistakes happen. "Genes that are switched on as the result of a chemical miscue can be expressed at the wrong time," he says. "Mistakes of this sort can lead to unchecked cell proliferation and the formation of tumours."

In disorders caused by altered hormonal balance, such as breast and prostate cancer, the disease can often be halted if the source of the hormone is removed or by chemotherapy, which interferes with the hormones. But sometimes, several years after treatment, the cancer can reoccur.

"One reason why chemotherapy may fail is that some histones may shift their position in chromatin during treatment," says Ausió. "If this happens, the affected region of the chromatin will likely change its folding configuration, which may lead to inactive genes becoming active once again, or the opposite."

To find out if this has occurred, Ausió uses a process known as DNA footprinting. The unfolded portions of the DNA strand are broken apart and what's left behind are regions of DNA that are wrapped around the proteins.

"If we compare the footprint of an unhealthy cell to that of a healthy one and find that the footprints don't match, then we know that the proteins in the unhealthy cell have moved to a spot on the chromatin fibre where they shouldn't normally be. This means that chromatin may play a greater role in genetically linked diseases than we originally thought," says Ausió.

Sometimes, chemical modifications to the DNA or proteins can lead to the chromatin fibre being folded even more tightly, suppressing the expression of genes required for normal cell function. "By studying chemical modifications made to the DNA and proteins, we can determine what causes the chromatin to coil even more tightly and hide genes, or to unfold and expose genes."

To detect changes in chromatin folding, Ausió uses an analytical ultra-centrifuge, a state-of-the-art instrument purchased with a $1.3 million grant from the Canadian Foundation for Innovation (CFI) and the B.C. Knowledge and Development Fund.

In his work with Rett syndrome, a fatal disease that affects the motor skills of young girls, Ausió studies the chromatin misfolding that alters the expression of genes needed for nerve cells to function properly.

"A mutation to a highly specialized chromatin-binding protein is involved in this disease. This mutated protein is found in every cell in the body, so the same mistake is made in every cell, but it affects only the function of nerve cells. Most cells don't need the genes encoded in the chromatin region affected by this protein, but nerve cells do."

The potential for Ausio's work is enormous. "If we can precisely determine what chemical modifiers cause chromatin to change its structure, ultimately activating or hiding certain genes, then pharmaceutical companies will be able to design drugs that target the proteins that make incorrect chemical modifications."

SPARK Kristi Skebo wrote this story as a participant in the SPARK program (Students Promoting Awareness of Research Knowledge), funded by UVic, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council.

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Campus plan

... cont'd from p. 1

process for determining the future of these areas will be outlined prior to the expiry of the moratorium.

"We're grateful to those who took the time to read the draft campus plan and provide us with their comments and suggestions," says Falk. "These recommendations send a signal to the community that we've heard their concerns and that they'll see evidence of it in the next version of the plan.

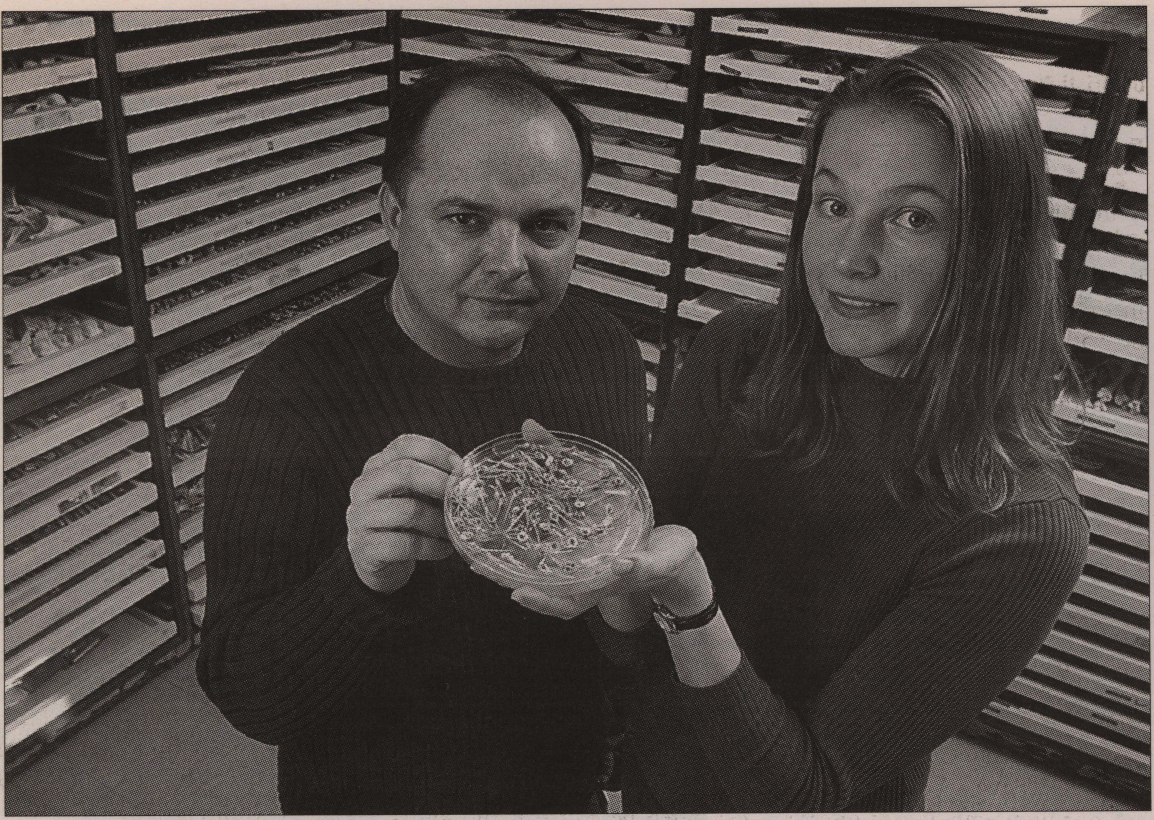
"It also confirms that we're going to continue to balance the need to provide opportunities for new students and programs on one hand, with environmental considerations on the other. The fact that UVic is recognized as one of the most beautiful campuses in Canada attests to our success in doing that for the past 40 years.

"We're a university and we have an obligation to meet the growing demand from our youth for university education in B.C. While it's difficult to predict what programs or areas will be in highest demand 10 or 15 years out, it's clear that we can afford to protect these areas for at least 10 years," says Falk.

The imposition of a 10-year freeze on building site six confirms the university's preference to use non-wooded sites for buildings whenever practical. The CDC is currently assessing potential sites for a new engineering and computer science building, including site five on the parking lot next to the Engineering Lab Wing.

While the completion of the medical building and related emergency access, as well as the potential use of site five for a new building, may require a small number of trees to be removed, the freezing of site six will leave most of the wooded area beside the Cunningham Building intact. If trees are removed, the goal, consistent with current practice, will be to plant new trees elsewhere on campus so that there is no net loss of trees. The recommendation on a review of the future role and structure of the CDC will allow the comments and suggestions on this topic to be given careful consideration.

A new campus plan will guide the physical development of the campus in accordance with the academic priorities established in *A Vision for the Future*, UVic's strategic plan, which was adopted by the university's senate and board of governors in early 2002.


ROB KRUYT

Mackie and graduate student Nicole Smith with fish bones used to identify ancient bones excavated at Haida Gwaii.

Experts in the sea

The legendary fishing culture of the Haida people has much older roots than previously believed

by Hannah Hickey

TO MOST PEOPLE, they just look like pointy rocks and old bones. But to UVic anthropologist Dr. Quentin Mackie, they're archaeological clues that tell how early inhabitants of what is now B.C. lived, fished and adapted to rising sea levels and rebounding continents near the end of the last ice age.

Mackie and his team are excavating sites in Haida Gwaii (the Queen Charlotte Islands), that contain 9,500-year-old remains. They were first discovered by Parks Canada archaeologist Daryl Fedje in the newly established Gwaii Hanaas National Park Reserve and Haida Heritage Site. Fedje contacted Mackie and the two now co-direct the project as a partnership between UVic and Parks Canada.

Last summer Mackie, Fedje, four graduate students, two Haida archaeologists, and several undergraduate volunteers worked at Richardson Island. The excavation site is a hole in the ground five metres deep. There are more than 50 layers of sediment remains, each corresponding to about one human generation. However, because of the acidic environment, only stone artifacts and severely burned bones have survived.

The bits of shaped stone date from a strange and tumultuous period. Sea levels were rising by five metres over a person's lifetime, chasing shore-dwelling populations continuously uphill. "If you were making camp by the ocean, by the time you were an adult the village that you were born into would be in the intertidal zone, your parents' camp would be the reef, and your grandparents' camp would be where you go fishing," explains Mackie.

While presenting obvious difficulties, rising seas had some advantages. The moving intertidal zone was continuously providing new sources of raw materials for making stone tools. At the same time, it was nibbling away at mature forest, dropping it into the water. "These people would never have had to cut a tree down in their lifetime," says Mackie.

And then, suddenly—on geological time scales—it stopped. Sea levels stabilized 9,000 years ago and remained stable for about 4,000 years, before lowering to the current level. In analysing the fragments, Mackie has noticed a switch from large, single stone spear points to many smaller "microblades," roughly coinciding with the time when sea levels stabilized.

He hypothesizes that when sea levels stopped rising, the raw materials for the large tools became scarce. The early Haida people adapted by switching to smaller, multi-blade tools, which made more efficient use of the resources found on mature beaches. The findings provide insight into how ancient peoples adapted to their radically changing environment.

Nearby, the Kilgii Gwaay site tells a different piece of the story. Here, shell fragments have lowered the acidity of the soil, preserving bone, wooden tools, basket fragments and even string. "The site is incredibly significant," enthuses Mackie. The next oldest site on the Northwest coast with evidence for wooden tools is only 5,000 years-old, half the age of the Kilgii Gwaay site.

The remains show that 9,500 years ago, people in Haida Gwaii were already experts in the sea. Mackie and his team have found evidence for a diet of marine animals, including albatross, seals, sea lions, ling cod, rockfish, and halibut—many of which can be caught only by adept fishermen.

"Archaeologists divide fish up differently from, say, biologists. These are what we would call 'deep water hook-and-line fish'; fish you couldn't catch with nets, fish that don't come close to shore, fish you can't spear," explains Mackie. "And these are feisty fish. Bringing them up, you've got to have a decent boat. You've got to be able to get them up to the boat, and then into the boat, and then kill them. This is evidence for full-blown marine adaptation.

"The Haida are well-known as being one of the most marine-focused and marine-adapted cultures in the world, anywhere, at any time. They live in a very remote, extremely rich, but also very challenging marine environment," says Mackie. "I mean, Joe Blow with his power cruiser fears going to Haida Gwaii, because it's nasty —there are reefs, there's a lot of bad weather. And these people were making a living there, 9,500 years ago."

Until now, it had been "conventional wisdom" that people in the Americas didn't have fully developed maritime exploitation until 5,000 years ago. The discoveries in Gwaii Haanas are new evidence that the legendary Haida fishing culture has much older roots than previously believed. The findings may also help to answer the mystery of the initial peopling of the Americas, supporting current theories that the earliest settlers travelled down the west coast.

The project is jointly funded by the Social Sciences and Humanities Research Council and the Natural Sciences and Engineering Research Council through the Coasts Under Stress program, and by Parks Canada. The artifacts found on the islands will be returned to the Haida Museum at Qay'llnagaay (Second Beach) after being dated and catalogued in a UVic lab. The work is done by permission of Parks Canada and the Haida Nation.

SPARK

Hannah Hickey wrote this story as a participant in the SPARK program (Students Promoting Awareness of Research Knowledge), funded by UVic, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council.

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While conducting research in Papua, Dr. Leslie Butt, with her young son Malcolm, attended a regional festival where men dressed in traditional attire.

Stemming the tide

A UVic researcher's study of sexuality and culture in Papua becomes a key weapon in the fight to contain the spread of HIV/AIDS

by Kristi Skebo

WESTERN NATIONS are often chided for turning a blind eye to the staggering loss of generations of Africans from AIDS-related illnesses. But what if the West had paid attention 10 or even five years ago? Could the worst have been avoided?

A similar chance presents itself now in a different part of the world, and Dr. Leslie Butt, a medical anthropologist in UVic's department of Pacific and Asian studies, hopes we can rise to the occasion. Her work with the U.S. Agency for International Development (USAID) and Family Health International (FHI) may point the way to averting an HIV/AIDS crisis among the indigenous people of Papua.

Not to be confused with Papua New Guinea, Papua is a province of Indonesia. Currently, there are one million indigenous people comprising 252 distinct tribes in a highland area less than half of the size of B.C. They are, however, outnumbered by migrant workers and soldiers from the rest of Indonesia, who control the region's infrastructure.

In 2001, Butt began a provincial study on sexuality, culture and AIDS among Papua's indigenous population. As part of her work, she developed several methods of data collection, which she taught to local Papuans. "By engaging researchers who were familiar with local customs, we established a cultural connection. Each researcher went back to his or her own tribe and worked within their community to obtain basic data about sexuality," she explains.

Much of the information was gained through interviews. "Many tribes still rely on subsistence farming for food and income," says Butt. "We encouraged our researchers to seek out a broad range of participants, and to travel to the sweet potato fields to interview older women and young mothers, as well as male leaders, tribal elders and youth in villages."

Among the 200 people interviewed, 54 young men and women agreed to maintain travel diaries. The diaries detailed the mobility of the participant, how far he or she ventured from the local tribe, as well as number of sexual partners, condom use and alcohol consumption over a two-week period.

Not surprisingly, the younger generation is at high risk for contracting HIV/AIDS; 29 per cent were sexually active by the age of 15, while 67 per cent were active by the age of 19. "Like most teenagers, they like to push traditional boundaries. They're more mobile than previous generations, are looking for jobs and socializing, and are more likely to undertake risky behaviour," says Butt.

Many teenagers engage in what Butt terms "secret sex," where their actions and explorations are carried out clandestinely to avoid tribal sanctions such as fines or forced marriage. Another form of sexual relationship on the increase is 'survival sex,' where women are forced to trade sex for money, food, shelter and sometimes for as little as a pack of cigarettes.

While the absolute numbers of HIV/AIDS cases is not equivalent to Africa's, the proportion of Papuans who have contracted the disease is climbing toward epidemic proportions. The main problem is the lack of education linking HIV/AIDS with sexual intercourse, which is the transmission route for 97 per cent of all AIDS cases contracted by Papuans. According to those interviewed, only 29 per cent of urban Papuans and 12 per cent of rural Papuans knew what a condom was, only 15 per cent of city-dwellers knew how to use a condom, and none of the rural Papuans interviewed had ever used one.

How then, can the rising tide of AIDS among Papuans be stemmed? The solution lies, in large part, in the success of Butt's study.

"The best way is to use the cultural beliefs and values of the Papuans to educate Papuans about how to prevent the spread of AIDS," she says. "We need to get information and condoms up into the remote mountain regions, across the vast swamplands and into the hands of those who most need them."

USAID and FHI are listening to what Butt and her team have to say. "Because they're spending $71 million over five years to promote AIDS awareness and prevention, they need to have a sense of what cultural barriers might impede or promote reduction of HIV transmission in Papua. Our project filled that gap."

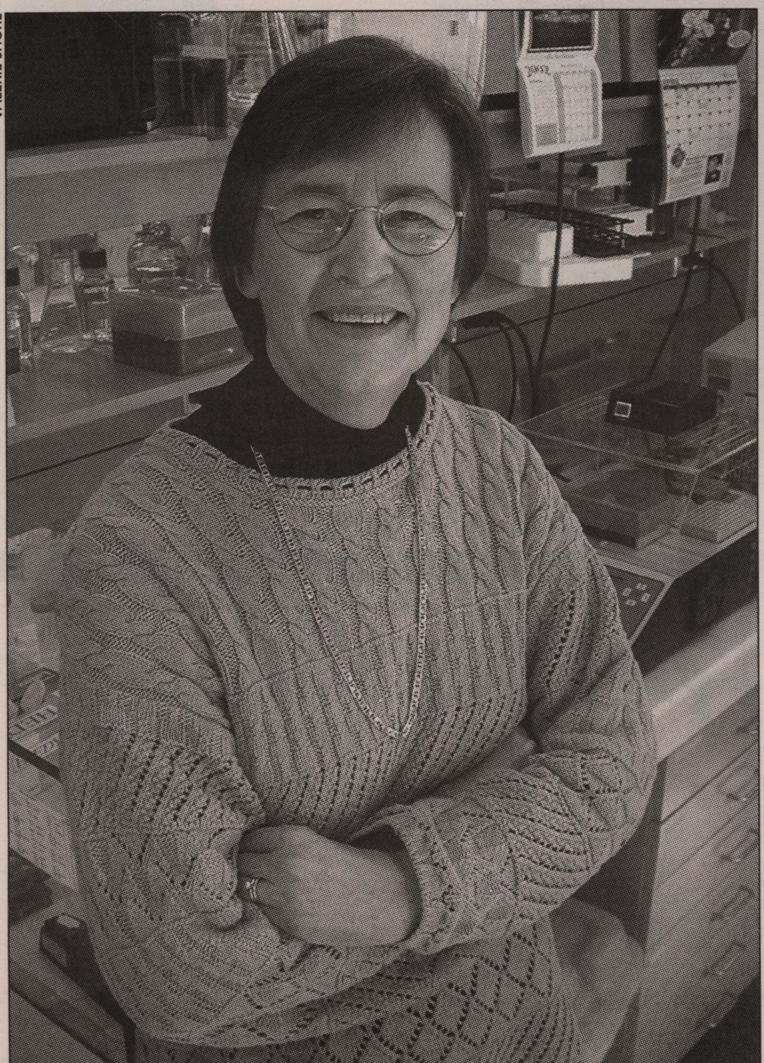
SPARK

Kristi Skebo wrote the stories on this page as a participant in the SPARK program (Students Promoting Awareness of Research Knowledge), funded by UVic, the Natural Sciences and Engineering Research Council, and the Social Sciences and Humanities Research Council.

Back to basics

A UVic biologist's fundamental research on brain hormones is paving the way for new clinical treatments

Sherwood



VALERIE SHORE

by Kristi Skebo

PUTTING YOUR FINGER on the nuances of basic research is often difficult. The curiousity that drives it, the creativity that shapes it and the process of trial and error that is inherent in it are seldom given credit in a world that prizes immediate results and direct applications.

So why do it? For scientists such as UVic biologist Dr. Nancy Sherwood, it's what we don't know that is most fascinating.

Dr. Sherwood's lab was recently awarded a five-year, $950,000 grant from the Canadian Institutes for Health Research to look for answers to basic questions about hormones. What does a hormone look like? How does it work? How did it evolve? Finding answers to these fundamental questions is the first step toward finding useful medical applications.

Sherwood's work focuses on neuropeptides, a type of hormone that is synthesized and released from nerve cells in the brain. One of the neuropeptides she and her students focus on is gonadotropin-releasing hormone (GnRH), which plays a pivotal role in regulating reproduction. How GnRH works and how it begins the cascade of hormone release is where her main interests lie.

GnRH triggers a sequence of events ultimately resulting in the release of reproductive hormones such as testosterone and estrogen. GnRH is used in treating fertility problems in women and supressing the release of reproductive hormones, such as testosterone, to inhibit the growth of prostate tumours.

The structure and one function of GnRH have been known since the early 1970s. So why keep working on it? "By exploring other functions of this hormone in simpler systems, we hope to find new approaches in treating medical problems," says Sherwood.

Sherwood and her students take a broad evolutionary approach. For example, they look for a GnRH hormone in less complex vertebrates, such as trout or salmon. "If we find that this hormone is structurally and functionally similar to that in more complex vertebrates such as humans," says Sherwood, "this suggests that the hormone has played a fundamental role in the regulation of reproduction in vertebrates from their evolutionary beginning."

By using her knowledge of the structure of the GnRH hormone in humans, Sherwood and her students used antibodies to find the GnRH hormone in fish and in a host of other animals, including sea squirts.

The body's immune system uses antibodies to hunt down and bind to foreign molecules. This same principle can be used to find and isolate molecules for study.

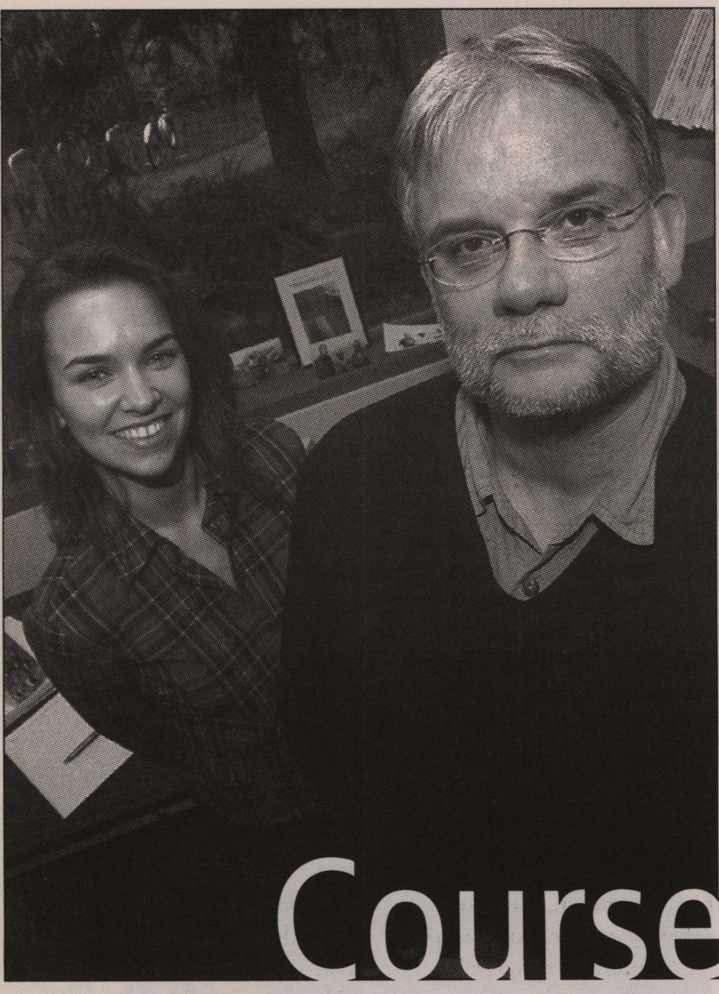
"It wasn't likely that the structure of the hormone in fish and in other animals was exactly the same as in humans," says Sherwood. "So we had to raise antibodies based on known structures and test to see if these antibodies detected novel forms of GnRH. As we determined the structures of more hormones, we raised specific antibodies so that they better matched the structure of the hormone. It's a process of continual refinement."

In the end, it worked. Her group found a family of GnRH hormones, including 10 new members, and identified the unique structural framework that is shared among GnRH family members. Based on this work, they've now isolated the genes for some of these hormones.

Up until 1983, scientists thought that only one form of GnRH existed in each group of organisms. Using her novel approach, Sherwood and her graduate students found not just one, but three forms of GnRH in a single fish brain.

Based on her findings, researchers now know that humans secrete two types of GnRH; the other one is released from a different area of the brain, an area that was not originally analysed. "Because the hormones have different structures and brain locations, they'll have different functions," she says. "Knowing the function of each hormone should help in clinical treatment of reproductive problems."

Course outlines



JOY POLIQUIN

Exner Murdock, left, and Roth.

A community effort

Opening eyes to the reality of AIDS

IT'S A DISEASE that affects people in communities in every country around the world, and Dr. Eric Roth wants his students to know as much about it as possible. His class, Anthropology 335: *AIDS in the World*, has a sombre topic, but it's one he hopes his class will understand better by the time the course is over.

He's not alone. In fact, professors from a variety of disciplines, as well as people within the Victoria community, have banded together to provide the students with a varied study of AIDS and its impact.

"It's incredible to see how much people want to contribute," says Roth. "Dr. David Levins from the biology department gives lectures related to microbiology, and shows videos about HIV. Then Dr. Moyra Brackley from biology and the centre on aging talks about testing and the epidemiology of HIV."

In addition, speakers from the Prostitutes Education Employment Rehabilitation Services, or PEERS, give talks to the class. "These are commercial sex trade workers," says Roth, "and some of them are living with HIV. Then Katrina Jensen from AIDS Vancouver Island has organized lectures about AIDS on a local scale, and the speakers have been terrific. Truly, it's been such a community effort."

The variety of people who help teach the course means that all aspects of the AIDS epidemic are covered—from the biology of the virus itself, to how it infects people, its rapid evolution, and the global impact of AIDS and its demographic consequences.

With more than 100 people in this 300-level course, it's a subject of keen interest for students. Roth keeps them thinking by assigning projects that encourage community change. Last year, students created posters to educate the public about harm reduction, safe needle exchange, and HIV in prisons. The posters were used by AIDS Vancouver Island.

This proactive approach has resulted in some students pursuing careers that relate to HIV education. Heidi Exner Murdock took the course as an undergraduate, and today co-teaches the course as a graduate student with Roth. She also works full-time for AIDS Vancouver Island.

"It's an amazing course," she says. "Not only does it have great academic value, but a lot of students become quite fascinated with the topic and pursue AIDS research in different areas. Plus, students learn so much that they end up going out and being educators themselves."

Rock solid

Probing Western Canada's fossil record

DINOSAUR FOSSILS. Lots of them.

That's what most people think of when they hear the word paleontology. But in Earth & Ocean Sciences 330: *Paleobiology*, the fossils studied are of a slightly smaller variety.

"Most people do think of dinosaurs," says course instructor Lee McKenzie McAnally. "But that's just because they were so big, and it's fun to imagine something that huge wandering around here." In fact, most of the fossils in the Victoria region are comparable to things that still exist today, like plants, snails and fish. "People don't seem to get as excited about that," she says.

Perhaps not the average person. But to students taking her class, there are plenty of fossils around to keep them busy.

"Because the class is small we're able to take field trips," says McKenzie McAnally. "We head out to a beach exposure near Sooke, and spend a Saturday looking at the fossils in the sedimentary rock of the Sooke Formation."

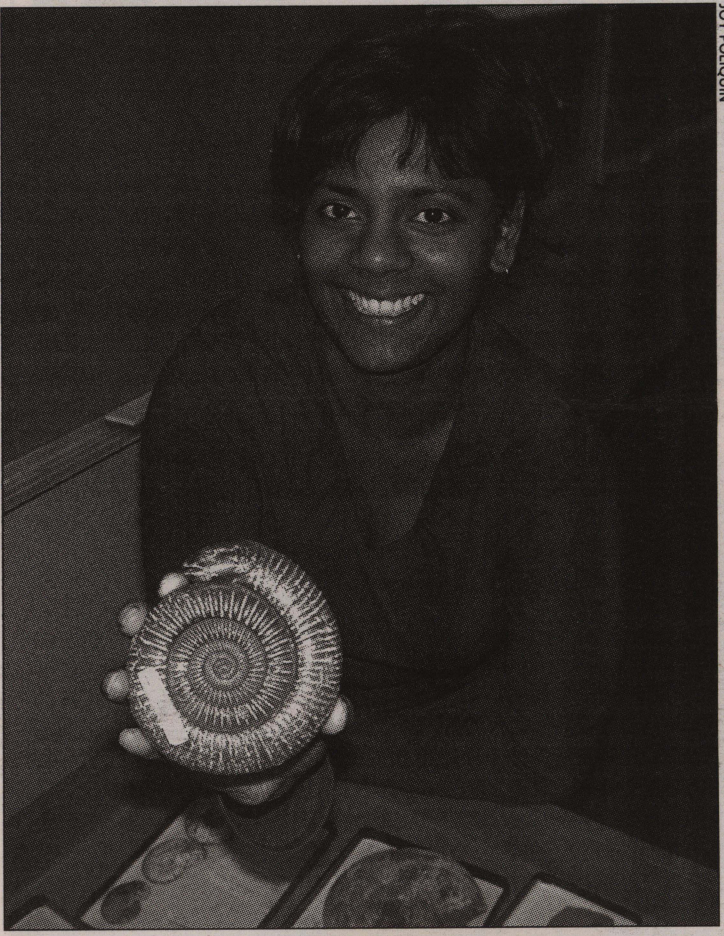
They also travel to some unexpected locales for fossil sightings. Their last stop on the annual field trip was the Fairmont Empress Hotel, part of which is built from Manitoba kindlestone. Visible on the surface of the stonework? Fossils mooching a stay at one of the swankiest hotels in town.

But the course is more than field trips. The class studies paleobiological theory, evolution and extinction, and biostratigraphy (rock dating) during weekly lectures. Each student presents a seminar on an extinct animal from the Burgess Shale, one of the world's most significant fossil sites, located in B.C's Yoho National Park.

The course is especially useful for earth and ocean science students who are required to take an advanced field school. "A lot of what we learn in paleobiology becomes incorporated into that field school," says McKenzie McAnally. It's a nine-day course held at the end of summer, where students drive to Drumheller, Alberta, to visit Canada's fossil motherlode—the Badlands—and the Royal Tyrrell Museum. Then they drive home through the Rockies, which are made up mostly of sedimentary rock, containing fossils.

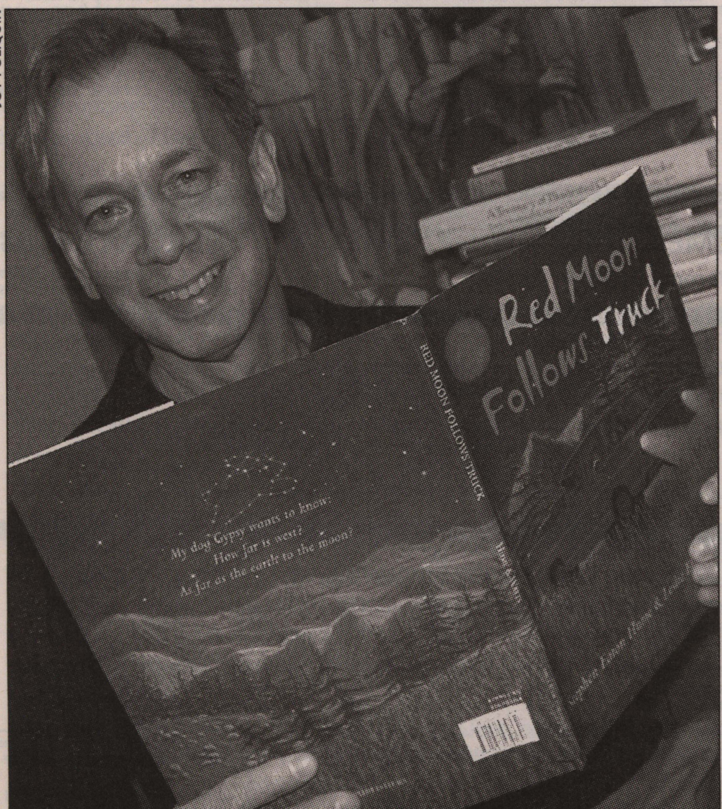
Even if students taking the course aren't heading toward a career in paleontology, McKenzie McAnally is confident that whatever knowledge they gain will contribute to their futures.

"Much of the Earth's history is based on the fossil record," she says. "To have an appreciation of paleontology and its contributions is so important to an earth scientist's knowledge base."



JOY POLIQUIN

Teaching assistant Roshni Narayan with an ammonite fossil.



JOY POLIQUIN

Hume

From Mother Goose to Munsch

Course comes with a storybook ending

FORGET ABOUT Shakespeare, Byron or Austen. The students in Stephen Eaton Hume's class are more concerned with the power and magic evoked by Chris Van Allsburg's *The Polar Express*, or the raw, conflicting emotions in Robert Munsch's *Love You Forever*.

As aspiring children's book authors, the students who take Hume's continuing studies course, "From Mother Goose to Munsch," do more than look at the pictures. Over the course of six weeks, they brainstorm concepts for potential picture books, story-board their ideas, learn about the publishing process, talk about censorship, write in-class exercises and read as if books were going out of style.

"I ask them to read as many picture books as possible, because the amount available is so vast, and there's so much to discover," says Hume.

One book they read in class is *The Polar Express*, about a boy who travels to the North Pole on Christmas Eve by boarding a train that pulls up outside his house. "Some adult critics have criticized the book by saying, 'Well, how can a train pull up if there are no tracks?' But that's part of the magic. I really want the students to see that adults can pidgeon-hole reality. The real world is so much bigger than many adults can possibly imagine."

As a recognized picture book author, Hume shares his knowledge of the publishing industry with his class. "Almost everyone ends up with a picture book manuscript and a cover letter to an editor, and they know where to send the story and how to choose a publisher. They recognize how varied picture books can be, in terms of subject and audience, and how the pacing of a picture book can be like a film."

One of the first books Hume's class reads is *The Snowman* by Raymond Briggs. The book, which has no words, relies on the pictures to dictate pace, story and drama.

Students also look at works for older readers like *Faithful Elephants*, an anti-war picture book by Yukio Tsuchiya about elephants in Tokyo's Ueno Zoo during World War II. "The zookeepers had to poison the dangerous animals in case they ran wild in the bombing, but the elephants wouldn't eat the poison, so the keepers had to starve them to death. You can learn a lot about the tragedy of war in that one simple book."

When Hume first read that book aloud in class, he heard noises. "I looked up and some of the students were crying. Picture books can be that powerful."

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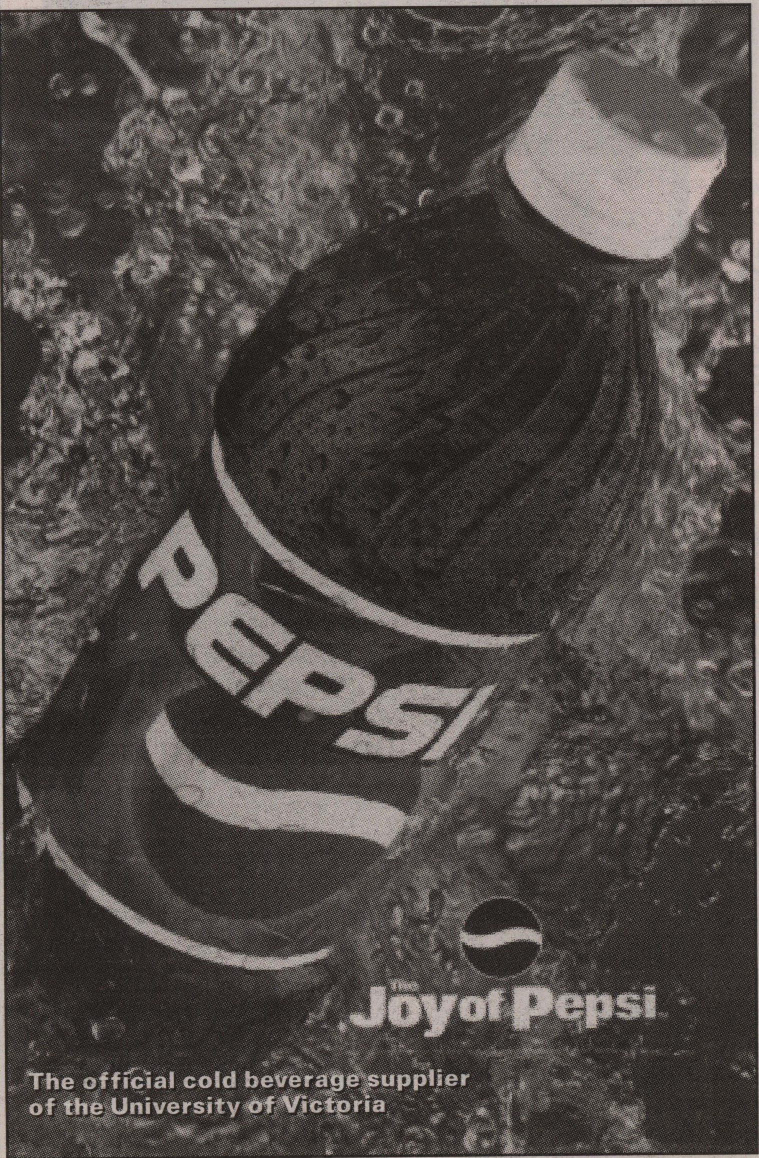

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Engineering team races to create telescope with perfect vision

by Maria Lironi

MARIA LIRONI

Bradley, with his custom-designed test-bed.

UVic mechanical engineering students, under the direction of mechanical engineering professor Dr. Colin Bradley, are designing a telescope that could provide the clearest images of the heavens yet.

Right now, even the most powerful telescopes provide a clouded view. Sights are obscured because temperature differences among air pockets blow across the telescope's line of sight and warp incoming light. The UVic team is developing the next generation adaptive optics (AO) system to improve the vision of existing telescopes and provide unmatched performance in the observatories of the future.

"The twinkle of stars, for example, is caused by the turbulence in atmospheric layers," Bradley explains. "An adaptive optics system senses and adjusts for those aberrations in real-time. Essentially, it gives you a sharper, clearer image to the point where you can get an exceptionally fine view of space without having to put a telescope on a satellite like they did with Hubble."

Bradley and his team are looking at very small adaptive optics components and developing the hardware and software that will compensate for multiple layers of turbulence. It's called multi-conjugate adaptive optics, or MCAO for short.

Bradley and his colleague Dr. Panajotis Agathoklis (electrical engineering) supervise students Peter Hampton, Jeff Kennedy, Onur Keskin, Brian Wallace, and Aaron Hilton. They're also working with researchers from the Herzberg Institute of Astrophysics: David Crampton, Glen Herriot, and Jean-Pierre Veran.

In the basement of the Elliott Building, the team is developing a scale model of a telescope that has a simulated star atmosphere and a whole MCAO system—with many small strategically placed mirrors, lenses, and cameras—laid out on a bench. Here, the researchers can test how adaptive optics systems behave using artificially created turbulence.

"There's a race right now among astronomers who want to receive and identify data from another solar system," Bradley explains. "But the solar system's sun would tend to swamp the signal from a neighbouring planet so you couldn't really discriminate between the two. It's kind of like trying to view a firefly buzzing around a huge search light from hundreds of kilometres away. You've got to focus on the firefly, and adaptive optics is a way of allowing you to do that."

If successful, the UVic team's design could also be used in eye surgery, astrophysics and telecommunications.

In many developing countries it's very expensive to put fibre-optic cable into big cities, says Bradley. It's cheaper to use point-to-point, laser-based communication systems situated on the tops of tall buildings. But the laser beam then has to contend with thermal currents and the associated aberrations created by the heating and cooling of cities.

"The adaptive optic technology compensates for the aberrations in the horizontal path through the atmosphere," he says. "It's a way of keeping the lightbeam signal optimized to prevent errors in the data that is being transmitted."

The cost and time of laying fibre-optic cable is prohibitive, not to mention the infrastructure and maintenance costs. Adaptive optics allows free space, point-to-point laser communications over several kilometres, without the need for cable.

The team's work is funded by a grant from the Canada Foundation for Innovation, with matching funds from the B.C. Knowledge Development Fund. It's hoped that their design will be used in the next generation of telescopes that will be put into use in 2012.

To find out more about this project, visit <www.me.uvic.ca/~cbr/>.

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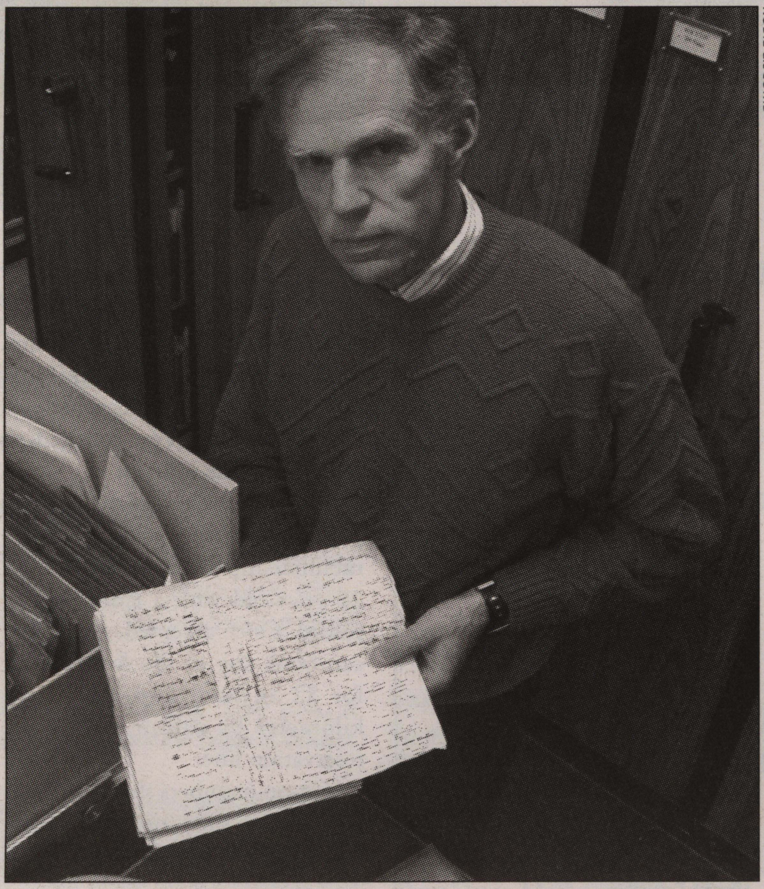
Project digitizes celebrated writer's manuscript diaries

Online diaries will improve access for scholars of *I, Claudius* author

by Robie Liscomb



ROBIE LISCOMB

Petter, with pages from the diaries.

The life of a special collections librarian can be shaped and even dominated by the nature of the holdings for which he or she is responsible. Just ask UVic special collections librarian Chris Petter, who has become something of an international expert on the diary of English poet and novelist Robert Graves (1895–1985), whose manuscript diaries from 1935–39 are among the prize holdings at UVic.

Special collections purchased the diaries in 1970, at the start of an ambitious library acquisitions campaign to support new graduate programs at UVic. Since then, a regular stream of international Graves scholars, including his three major biographers, have trekked to UVic to study the diaries.

But soon, they may not need to travel here and handle the fragile diary pages in order to conduct their research. Petter and Dr. Elizabeth Grove-White (English) have recently launched an innovative project to provide comprehensive electronic versions of the diaries on the Web that will meet the rigorous standards and requirements of scholarly research, as well as provide a straightforward reader's text of the Graves diaries.

Graves is well known for his novels *I, Claudius* and *Claudius the God*, his poetry, and many books on classical mythology. The diaries are from a time when Graves collaborating with controversial American poet and theorist Laura Riding. When transcribed into typescript, they are 800 pages long, contain two previously unpublished poems, much valuable literary-historical information and fascinating evidence of how Graves worked. They include 117 enclosures, ranging from telegrams to news clippings.

Reproducing the complexity of the diaries' structure and detail in electronic form poses a formidable challenge. All diary pages and enclosures were scanned. Linda Roberts (UVic MA in English, 2001) is working with Petter, comparing a complete transcript of the diaries, done by Graves' wife Beryl, with the original diary pages.

Petter and Roberts will also be identifying diary references, an effort greatly assisted by consulting an annotated transcript of the diaries by Graves' former personal secretary, which Petter discovered in the Graves Trust archives at St John's College Oxford.

Prior to this project, Undine Bruckner and Martin Holmes (humanities media and computing centre) did some pioneer work by creating a pilot Web site in Extensible Markup language (XML) [web.uvic.ca/hrd/graves/].

The project has taken Petter across Canada to learn from others involved in similar use of XML and twice to Europe. Last summer, with funding from UVic and The British Council, he visited St. John's College, Oxford, to consult with colleagues in the Robert Graves Trust and at the Oxford University Computing Centre. He then travelled to the Graves' family home in Majorca, where he stayed with Graves' son, William, researching the content of the diaries.

In December, Petter attended the opening of an exhibition on Graves at the Circulo de Bellas Artes in Madrid, to which UVic special collections contributed images of several diary pages and other manuscripts, drawings and correspondence.

Petter, Grove-White and Roberts hope to make this into a research project in which students can participate and learn electronic publishing skills. They also hope to attain grant funding to teach technical and programming skills, as well as complete the diary editing.

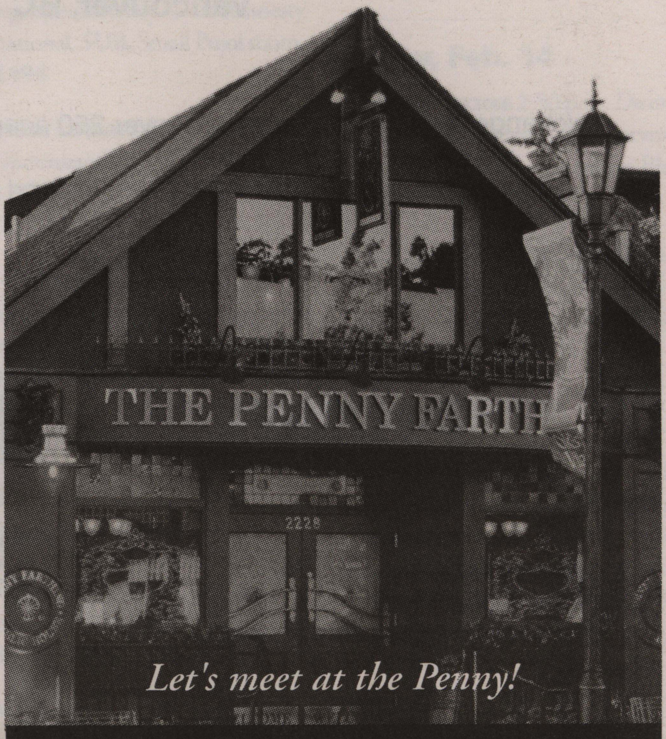
An official launch for the diary is planned for the summer of 2006, when UVic hosts an international conference on Graves, religion and myth.

newsmakers

"Inevitably, it will raise the question in the public's mind—how come this minister is resigning and the premier did not?" said **Michael Prince** (political science) in the *Times Colonist* (Jan. 28). He was responding to news that John van Dongen, Minister of Agriculture, Food and Fisheries, has resigned while under investigation by the RCMP for his handling of an aquaculture file. Prince said that van Dongen's situation arose directly out of his performance of his ministerial duties and responsibilities. "He has done the honourable thing and resigned. I think that is a reassuring message."

Competing internationally while also playing for a university squad sometimes has severe repercussions on the type of schooling and academic programs an athlete can take, said rugby coach **Doug Tate** in the *Saanich News* (Jan. 29) of the pressures facing athletes who split their time between varsity and national teams. "It can have a significant bearing on the program you can take," he said, citing courses that require on-campus lab work. On the other hand, the international experience has huge benefits. "You can't put a value on the experiences you're getting," Tate said. "You come back way better and make other players better. The effects are residual on the whole team."

"We encourage students to get help and we even have a centre at the university that helps students write essays. On the other hand, we want them to do their own work," said **Michael Webb** (political science), chair of the senate committee on academic standards, in a *Vancouver Sun* (Jan. 30) story on the struggle of universities to determine the role of paid tutors and what constitutes cheating. Webb says that until the university comes up with hard and fast rules about how much help students get with their work, it's up to professors to clearly outline the expectations at the start of a course.



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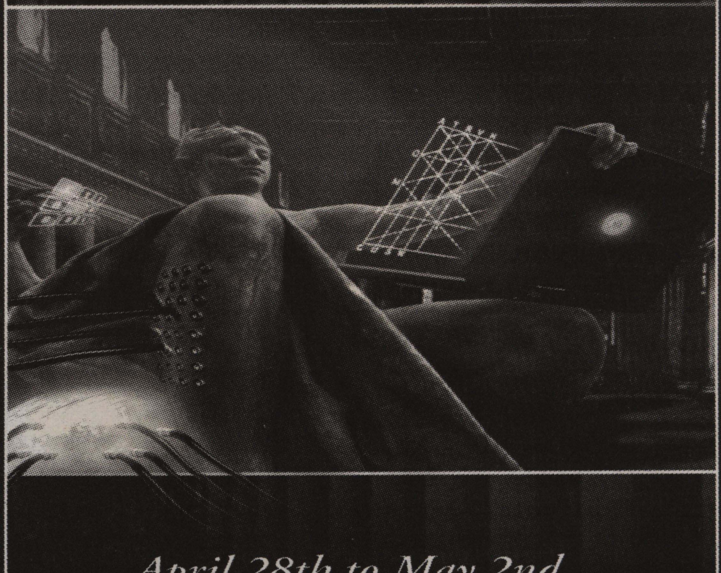

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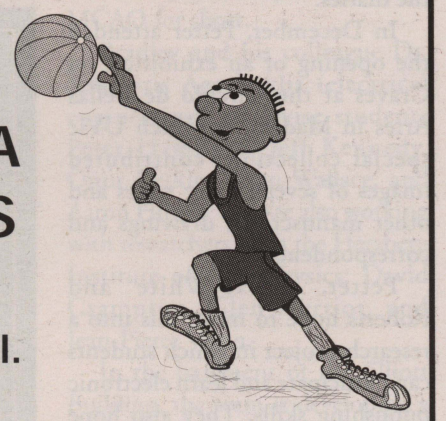

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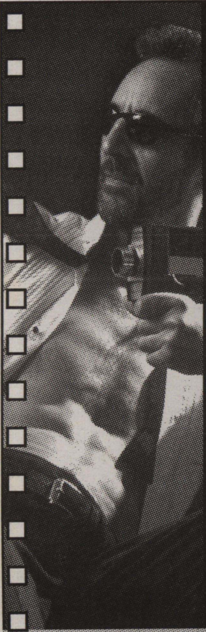

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HEATHER MCCLOY

Webb and the newest Car Share vehicle.

Car co-op ... cont'd from p. 1

co-op cars on campus in the future. She also hopes to upgrade this first car to a Honda hybrid vehicle so that students can be exposed to alternative fuel sources.

To join the co-op, you must pay a refundable, one-time $400 membership fee and be at least 21-years-old with a clean driving record. Once accepted, a member can book any of the five vehicles for $2 an hour and 35 cents a kilometre by calling a 24-hour reservation line.

Co-op members share the costs of maintenance and insurance. Usage fees are based on distance and time for running costs. There are several vehicle options, including a minivan, a pick-up truck and several cars, located in Fernwood, Fairfield, James Bay, downtown and near the bus loop at UVic.

Car co-ops started in Europe, where there are now more than 50,000 members of car-share organizations. The Victoria Car Share Co-op started up in 1997. For more information on the co-op, go online to <vvv.com/~carshare/> or call 995-0265.

ringers

Dr. **Esther Strauss** (psychology) has been elected a fellow of the American Psychological Association (APA) for 2003. APA fellows are selected for their exceptional and outstanding contributions to the research, teaching or practice of psychology. Fellows must also demonstrate the national impact of their work, leadership roles within psychology or community service in their clinical practice. The APA is the largest scientific and professional organization representing psychology in the U.S. and is the world's largest association of psychologists.

UVic President Dr. **David Turpin**, board of governors chair **Linda Dryden**, business professor and former vice president finance and operations Dr. **Don Rowlatt**, and basketball coach **Kathy Shields** are all new recipients of the Queen's Golden Jubilee Medal. The award, which commemorates the 50th anniversary of the queen's reign, recognizes people who have made outstanding contributions to their communities, province or country, either through their careers or through volunteer work. "It is a tremendous surprise and honour to receive such a prestigious award," says Shields. "I think it's the first medal for most of us," says Rowlatt. "Many of us receive awards of merit or certificates or plaques to hang in our offices, but it's not very often you get a medal if you're a civilian. So it's kind of cool."

letters

Turn off the lights, please

When I come into the university on weekends or evenings, all of the lights are on in the hallways. Some universities have light switches which turn off most of the lights leaving a few night lights.

Since the city is cutting down on the use of electricity for its traffic lights by using new technology, couldn't the university save electricity by using old technology?

Dr. Jim Hackler, Sociology

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At the Galleries

www.maltwood.uvic.ca Info: **721-6562**

23rd Annual Art Education Faculty Exhibition (until Feb. 13) Featuring recent artwork by art educators in the faculty of education. McPherson. Info: **721-6562**

They Don't Make Them Like They Used To (until March 15) Exhibition of wooden furniture designed and constructed by cabinet-makers of the Victoria region. Maltwood. Info: **721-6562**

Thursday, Feb. 6

Sessions in Spirituality 11:30 a.m. *Write to the Heart: Journaling the Spiritual Journey.* Ray McGinnis, instructor of journal and poetry writing. Interfaith Centre. **472-4159**

Lansdowne Lecture 7:30 p.m. *The Bible as Book, and the Life of the Mind.* Dr. John Van Engen, Univ. of Notre Dame. Clearihue Bldg., room A127. **721-6271**

Asia-Pacific Initiatives 4 p.m. *Canada-Asia Relations: What Are the Prospects?* Nick Etheridge, former Canadian High Commissioner to Bangladesh, and Yeun-Pau Woo, VP research and chief economist, Asia-Pacific Foundation. Strong Bldg., room C122. **721-7020**

Fine Arts Gala 2003 Opening 7:30 –10 p.m. *Hot Box.* Visual Arts Bldg., main gallery. **721-8011**

Friday, Feb. 7

Fridaymusic 12:30 p.m. Featuring guitar students. MacLaurin Bldg., Phillip T. Young Recital Hall **721-7903**

Philosophy Lecture 2:30 p.m. *A Liberal Theory of the Rights of Soldiers.* Chris Maier, UVic. Clearihue Bldg., room A303. **721-7512**

Public Administration Seminar 4 p.m. *To Click or Not To Click: E-Learning for the Public Sector.* Kate Seaborne and John Langford, UVic. Strong Bldg., room C108. **721-8056**

Music Performance 8 p.m. *University of Victoria Wind Symphony.* Dr. Gerald King, conductor, with graduate assistant conductor, Sarah Hogge. University Centre Farquhar Auditorium. $10/8. **721-7903**

Vikes Women's Basketball vs. Univ. Calgary 6:30 p.m. McKinnon Gym. Tickets available at the event. **721-8725**

Vikes Men's Basketball vs. Univ. Calgary 8:15 p.m. McKinnon Gym. Tickets available at the event. **721-8725**

Saturday, Feb. 8

Continuing Education Workshop 9 a.m. *15th Annual Medieval Workshop: "Love of Learning in the Middle Ages."* Dr. Giles Constable, Princeton Univ., Dr. Deborah Hatfield-Moore, UVic., and Dr. John van Engen, Univ. of Notre Dame. MacLaurin Bldg., David Lam Auditorium. $49.22. **472-4747**

Music Performance 8 p.m. *A Mozart Menu (with appetizers!).* Directed by Alexandra Browning with Charlotte Hale, piano. (Another performance on Feb. 9.) MacLaurin Bldg., Phillip T. Young Recital Hall $12/8. **721-7903**

Vikes Women's Basketball vs. Univ. Calgary 6:30 p.m. McKinnon Gym. Tickets available at the event. **721-8725**

Vikes Men's Basketball vs. Univ. Calgary 8:15 p.m. McKinnon Gym. Tickets available at the event. **721-8725**

Monday, Feb. 10

UVic Career Fair 10 a.m. – 3:30 p.m. *Opportunities at Hand.* Continues Feb. 11. SUB, Michele Pujol room. **721-8412**

Tuesday, Feb. 11

Department of History lecture 12:30 p.m. *Stories of Us: Collecting Family and Village Histories in Central Vietnam.* Anne Nguyen, POLIS project, UVic. Cornett Bldg., room A129. **721-7387**

Film & Discussion Series: Alternatives to Violence 12:30–1:30 p.m. *Nashville: We Were Warriors.* A film on the desegregation movement in the U.S. Centre for Innovative Teaching, room 110. **721-8777**

Earth & Ocean Sciences Research Seminar 3:30 p.m. *News From New Zealand on Continental Dynamics: Geophysical Images of Lithospheric Deformation Around the Alpine Fault.* Dr. Martin Scherwath, UVic. Elliott Bldg., room 061. **721-8848**

Wednesday, Feb. 12

Blood Donor Clinic 10 a.m.–4 p.m. Continues Feb. 13. SUB, Michele Pujol room. **382-2213**

Art Exhibit 10:30 a.m.–7 p.m. *Traditional Chinese Paintings by Zhang Cuiying.* Sponsored by UVic Amnesty International. SUB, Small Pujol room. **995-1494**

Lansdowne Lecture 12:30 p.m. *Dignity and Discrimination.* Denise Reaume, Univ. of Toronto. Fraser Bldg., room 158. **721-8147**

Asia-Pacific Initiatives Seminar 12:30 p.m *Contesting Diasporic Subjectivitiy: Malaysian Independent Filmmaker James Lee.* Gaik Cheng Khoo, UVic. Strong Bldg., room C126. **721-7020**

Centre on Aging Lecture 2 p.m. *What Brings You Here Today? The Role of Self-Assessment in Help-Seeking for Chronic Conditions.* Dr. Arlene Carson, UVic. Strong Bldg., room C108. **721-6368**

Physics Lecture 3:30 p.m. *Weak Interaction Symmetries with Laser Traps.* Dr. John Behr, TRIUMF. Elliott Bldg., room 061. **721-7700**

Religion & Society Lecture 4 p.m. *The Argument of Design in Victorian Natural Theology.* Nicolaas Rupke, Univ. of Göttingen, CSRS/history visiting fellow. Centre for Innovative Teaching, room 110. **721-6695**

Humanities Lecture 4:30 p.m. *Tales of a Transcendent Talent: Li Bai in the Arts of China.* Dr. Kathlyn Liscomb, UVic. Clearihue Bldg., room A206. **472-4677**

Thursday, Feb. 13

UVic Retirees Assn. Lecture 11 a.m. *Darcy Island Leper Colony.* Chris Yorath, UVic. Golden City Restaurant. $20, includes lunch. **472-4749**

Music Presentation 11:30 a.m. *Schonberg, Jazz and Adorno: The Case for Defence.* Dr. Murray Dineen, Univ. of Ottawa. MacLaurin Bldg., Phillip T. Young Recital Hall. **721-7903**

Political Science Lecture 12 p.m. *Misrecognized Materialists: Women's Organizations and the Struggle for Recognition in Canadian Constitutional Politics.* Dr. Matt James, UVic. UVic Centre, room A180. **995-8514**

Music Presentation 1 p.m. *Leider at Lunch.* Sharon and Harald Krebs. MacLaurin Bldg., room B307. **721-7903**

Political Science Lecture 7:30 p.m. *Suspicion, Secrecy and the Search for Security: Rethinking Surveillance Priorities after September 11.* David Lyon, Queen's Univ. Univ. Centre Farquhar Auditorium. **721-7486**

Music Presentation 8 p.m. *String Chamber Music.* Lafayette String Quartet and Yariv Aloni. MacLaurin Bldg., Phillip T. Young Recital Hall. Admission by donation. **721-7903**

Friday, Feb. 14

Philosophy lecture 2:30 p.m. *Dworkin on Liberty and Equality.* Jan Narveson, Univ. of Waterloo. Clearihue Bldg., room A303. **721-7512**

Public Adminstration Lecture 4 p.m. *Why are Canadian Cities Segregated?* Larry McCann, UVic. Strong Bldg., room C108. **721-8056**

Sunday, Feb. 16

School of Music 2:30 p.m. *Viola Class Recital.* Students of Joanna Hood, performing works of Bach, Bartok, Schumann and Brahms. MacLaurin Bldg., Phillip T. Young Recital Hall. **721-7903**

Monday, Feb. 17

School of Music 8 p.m. *Student Composers Concert.* MacLaurin Bldg., Phillip T. Young Recital Hall. **721-7903**

Law/Environmental Studies Lecture 7 p.m. *Getting to 100 per cent: The Hu'qum'num Treaty Group Negotiations for Traditional Territory.* Robert Morales, chief negotiator, Hul'qum'num Treaty Group. Fraser Bldg., room 159. **472-5016**

Tuesday, Feb. 18

Film & Discussion Series: Alternatives to Violence 12:30–1:30 p.m. *India: Defying the Crown.* A film on Gandhi's Salt March of 1930. Centre for Innovative Teaching, room 110. **721-8777**

Physics & Astronomy Lecture 3:30 p.m. *The Technological Challenge of Imaging Extrasolar Planets from Ground-based Telescopes.* René Doyon, Univ. de Montréal. Elliott Bldg., room 062. **721-7700**

Wednesday, Feb. 19

Biology Graduate Student Symposium 9 a.m.–3 p.m. Highlighting current research by biology graduate students. Poster session 3:30–5:30 p.m. (Symposium continues Feb. 20.) Centre for Innovative Teaching, room 105. **721-8858**

RING PUBLICATION SCHEDULE SPRING 2003

Calendar items should be sent to UVic communications (Sedgewick 149, fax 721-8955, e-mail ucom@uvic.ca) or entered into the online calendar (www.uvic.ca/events) by no later than 4 p.m. on the Wednesday prior to publication. Late submissions cannot be accepted for publication. For more information, call 721-7636.

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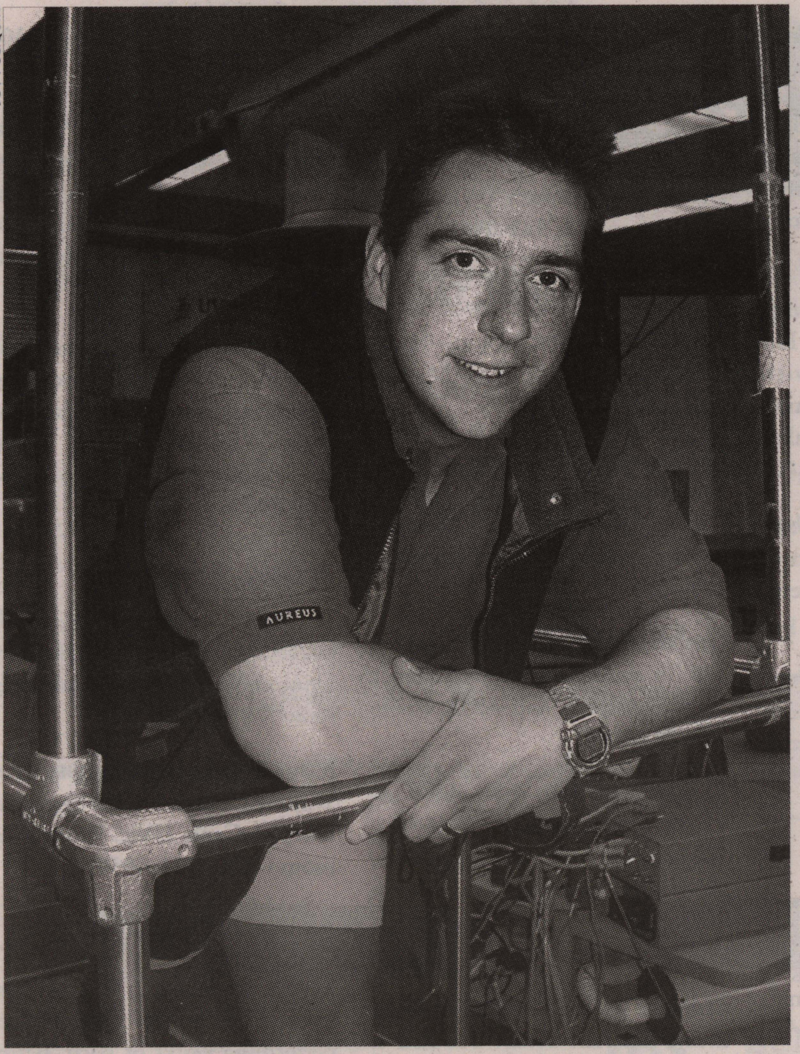


Zehr

Neuroscientist delves into the mechanics of movement

by Joy Poliquin

WHEN DR. PAUL ZEHR was 13 years-old, he became fascinated with martial arts. But it wasn't the showmanship of the sport that amazed him; it was the motor skills required.

"I realized how amazing it is to watch someone move as quickly as they can toward a target, and then stop right before they hit it," he says. "From a scientific perspective, the human ability for movement is incredible."

Zehr, who joined the physical education department last fall, has transformed his interest in motor skills into a career. He holds a PhD in neuroscience from the University of Alberta and has spent the last four years there researching potential rehabilitation methods for people with stroke or spinal cord injuries. He'll continue that research at UVic.

By having healthy participants walk treadmills and use an arm-cycling machine, Zehr has determined that rhythmic arm and leg movements, such as walking, are controlled by circuits within the spinal cord. "You don't really need your brain to do these activities," he says. "Your brain helps, but the intrinsic properties of your spinal cord generate the pattern you need. It's called the central pattern generator, or CPG."

The next step in Zehr's research is to determine how to use the CPG in rehabilitation. "By getting people to do specific things like treadmill walking or arm-cycling, we can try to get the spinal cord to switch into the CPG mode of activity, to make use of different reflex pathways and bring function back."

Zehr has been primarily funded by NSERC, and has just received grants from the Heart and Stroke Foundation of Canada and the Christopher Reeve Paralysis Foundation.

Despite being excited about pursuing his research, Zehr can't wait to spend time in the classroom. "I really try to pull a lot of research ideas into my lectures, so that students can understand how dynamic this field really is."

Engineering prof aims for a clean energy future

by Joy Poliquin

GASOLINE? Forget about it. For new engineering faculty member Dr. Andrew Rowe, liquid hydrogen is the fuel of the future. And he's determined to make this environmentally friendly fuel functional.

A graduate of UVic's mechanical engineering PhD program, Rowe is a longtime member of UVic's Institute for Integrated Energy Systems. He's spent the last seven years working with the institute, looking at energy sources and their impacts on the environment.

"We're examining potential energy carriers and technologies, and we believe hydrogen is the eventual winner. It's environmentally friendly on the emissions side because there's no $C0_2$, which is a big concern with fossil fuels."

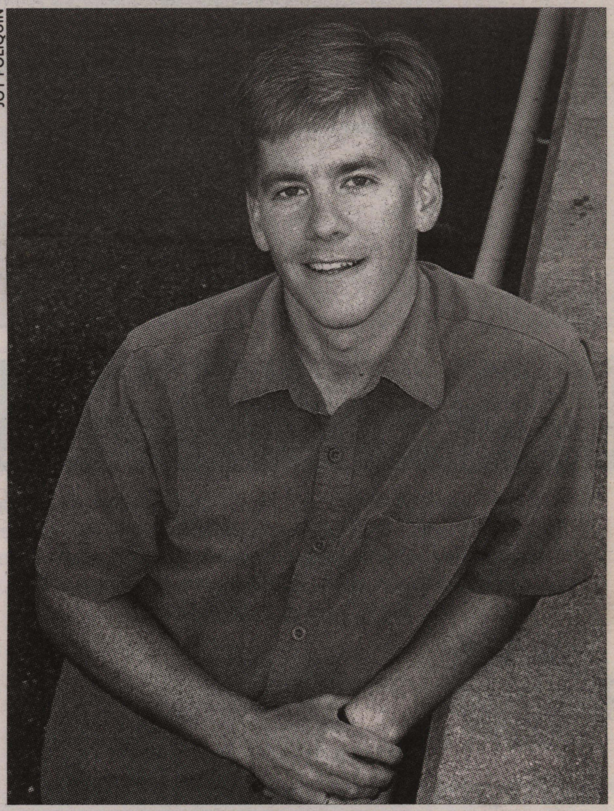
Of course, knowing that hydrogen is a potential fuel is not enough. The next hurdle is creating an efficient form of hydrogen. "Liquid hydrogen is best," says Rowe, "because then it's like gasoline. It's a very high-energy, dense product and you can contain a lot in a small volume."

This is where the research gets really tricky. To liquefy hydrogen, it must be maintained at 20° Kelvin, which is about –250°C. But traditional refrigeration technologies don't cut it. Rowe and his team are currently working on a magnetic refrigeration system that can produce liquid hydrogen.

If they succeed, they'll be able to use liquid hydrogen to fuel motors, fuel cells, even propulsion systems for ships. "It would be a small and compact system, energy-efficient, and environmentally friendly."

Rowe's research is unique to UVic. "The potential impact is so big, and yet hardly anyone else is doing it," he says. "If we can make this work, it can really change the impact of the way we live. There's constantly a carrot dangling ahead of us, tempting us to push just a little bit further."

JOY POLIQUIN



Rowe

JOY POLIQUIN

Deckha

Bioethics intrigues new law professor

by Joy Poliquin

MANEESHA DECKHA is on a roll. As a new professor in the faculty of law, she's fresh from a graduate law degree from Columbia University. Before that, she earned a law degree from the University of Toronto, after graduating from McGill University with a joint degree in political science and anthropology, and a minor in womens' studies. She even squeezed in some time as a lawyer in Ontario.

It's a love of learning that brought her back to university. "It's always been my dream to be a professor of law," she says, "and UVic is the perfect fit. When I came for my interview, everyone seemed so happy to be working here, and that's always a good sign."

While a student, Deckha explored issues of justice within the human realm, and discovered her research interest. "I wondered why we draw the line between humans and non-humans when it comes to rectifying injustice. A lot of critical theory looks at how so-called natural categories, like man and woman, nature and culture, are often socially constructed. But very little was being done to interrogate the boundaries between humans and non-humans."

Deckha is particularly interested in animal rights, and the reason animals continue to be viewed as property. How we draw the line between personhood and property is especially significant, she says, in light of recent genetic technologies and experiments. "Whether it is fetuses or embryos or animals, there are social and moral implications that need to be examined."

She looks forward to exploring these issues in a seminar she's developing. "It will be geared toward the area of bioethics, new technologies, personhood and rights, and social implications," she says. "At least that's the plan."

For now, Deckha is teaching courses on property law and administrative law—and getting some fresh perspective on the learning experience. "It's great to be on the other side, after all those years of being a student," she says.